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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/738,319 | 12/18/2000 | Salah Ait-Mokhtar | D/A0466 | 2262 |

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Oliff & Berridge PLC
P O Box 19928
Alexandria, CA 22320

EXAMINER

HARPER, V PAUL

| ART UNIT | PAPER NUMBER |
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2654

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DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/738,319

Applicant(s)

AIT-MOKHTAR ET AL.

Examiner

V. Paul Harper

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 August 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached discussion.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Vijay Chawan 9/15/03
VIJAY CHAWAN
PRIMARY EXAMINER

GRA

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/20/03 have been fully considered but they are not persuasive.

2. Applicants assert on page 2:

Initially, Applicants do not understand why this rejection is repeated verbatim from its form in the May 15, 2003 Office Action, despite the fact that in the "Response to Arguments" portion of the Office Action, a completely different part of Liddy (col. 15, line 63 through col. 16, line 10) is relied upon to allegedly disclose the feature of "skeletising each of the first representations to generate a corresponding second representation for each of the input strings; said skeletising step replacing the linguistic information with abstract variables in each of the second representations" than is relied upon in the rejection as stated. The stated rejection relies on col. 6, lines 15-20., Figs. 1 and 2, col. 6, line 63 through col. 7, line 5 of Liddy to allegedly disclose this feature.

If col. 15, line 63 through col. 16, line 10 is the portion of Liddy that is actually being relied on to anticipate the quoted "skeletising" feature, then making the current Action a final Office Action is improper. Applicants are entitled to procedural and substantive due process, which includes having the right to receive a non-final Office Action where the basis of the rejection is changed from the previous ground of rejection and where the change is not required by claim amendments. Here, the claims were not amended with respect to the "skeletising" feature.

Applicants respectfully request clarification of the actual basis of the rejection insofar as the "skeletising" feature of claims 1-8, 10-18 and 20 is concerned.

As indicated the stated rejection relies on Liddy col. 6, lines 15-20., Figs. 1 and 2, col. 6, line 63 through col. 7, line 5 of Liddy. Fig. 2 (referred to in the rejection) shows a series of processing steps including MCGD step, item 160, where an example is later given on col. 15, line 63 through col. 16, line 10. This example was introduced in the arguments to further clarify the rejection and was referred to by portion of Liddy

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referenced in the rejection; thus, the examiner does not feel that new grounds for rejection have been introduced.

3. Applicants assert on page 4:

None of this processing in Liddy replaces earlier performed linguistic analysis. Liddy just performs additional processing of a query or of a document, but does not replace the earlier processing results. Not only does Liddy fail to disclose replacing linguistic information with other information, but Liddy also fails to disclose replacing linguistic information with abstract variables.

Fig. 2 indicates a series of processing steps ending with the generation of the monolingual concept vector MCVG (these steps are perhaps more clearly seen in Fig. 5) where the final representation is used for searches (i.e., the vector in the far right of Fig. 5). Thus, the examiner believes that Liddy does disclose the replacement of linguistic information with other information.

4. Applicants assert on page 4:

With respect to the- additional reasons- presented-in the "Response to Arguments" section of the Office Action, i.e., with respect to Fig. 5 and col. 15, line 63 to col. 16, line 10 of Liddy, Applicants respectfully submit that the invention recited in claim 1 is not disclosed in those portions of Liddy.

Liddy does not replace linguistic information with an "abstract variable" as recited in claim 1. The Microsoft Press Computer Dictionary, 1991 edition, defines "abstract data type" as "a data type that is defined in terms of the information it can contain and the operations that can be performed with it. An abstract data type is more generalized than one constrained by the properties of the object it contains . . ."

Applicants respectfully submit that what is disclosed in the paragraph bridging cols. 15 and 16 of Liddy is constrained by the properties of the object it contains, i.e., the codes to which individual words are mapped clearly represent certain properties (e.g., meanings) of those individual words, and the codes are not abstract data of any type, let

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alone "abstract variables", as recited in claim 1. There is no indication in Liddy that the codes are defined in terms of the information they can contain and in terms of the operations they can perform. In other words, the disambiguated concept codes of Liddy are not "abstract variables", as recited in the claims.

Moreover, the "Response to Arguments" does, not address what "abstract variables" are. Instead, it simply states that a word is disambiguated and then represented, i.e., replaced with disambiguated concept codes. Thus, the Office Action does not present any evidence to demonstrate that "disambiguated concept codes" correspond to "abstract variables", as recited in the claims.

Liddy generates both conceptual and term-based *alternative representations* of the documents and queries (col. 6, lines 17-19) including the processing performed in the MCGD step (col. 15, lines 64 through col. 16, line 10). In addition, the use of "concept groups" and "concept categories" (Fig. 2, clarified in Fig. 5) can be argued are "abstract variables" since they are data types defined in terms of the information that they can contain.

5. Applicants assert on page 5:

If (§1, last paragraph) is actually the portion of Collins that is being relied on to provide proper motivation to allegedly render claim 19 obvious, then making the current Action a final Office Action is improper. Applicants are entitled to procedural and Application No. 09/738,319 substantive due process, which includes having the right to receive a non-final Office Action where the basis of the rejection changes from the previous ground of rejection and where, as here, the rejected claim was not amended.

Applicants respectfully request clarification of the actual basis of the rejection insofar as the portion of Collins that is relied upon to provide motivation to combine the two applied references as suggested.

The examiner attempted to clarify the benefit (i.e., the motivation to combine) of an "improved representation" during information retrieval where it is well-known in the art that an improved representation can reduce memory requirements.

6. Applicants asserts on page 7:

Moreover, Collins is concerned with natural language parsing which attempts to determine the sequence structure of sentences, whereas Liddy is concerned with categorizing individual words, and does not parse sentences. The Office Action never explains how one is allegedly motivated to modify Liddy's word-by-word translation system with Collins' sentence parsing system, or what in Liddy is re-ranked and how it is re-ranked, or what results from such an allegedly desirable re-ranking. Applicants respectfully submit that the details of how Liddy is allegedly modified by Collins are left up to speculation or further invention.

Finally, even if these two references were somehow properly combined, they would not render obvious the method of claim 1 because they are directed to different functions (e.g., word-by-word translation versus sentence parsing) and have different objects (e.g., document retrieval versus natural language parsing).

Liddy teaches a method for multilingual document retrieval which includes a set of processing steps (sequence of functions) to generate a language-independent conceptual representation of the subject content of a document (text) (title, abstract, Fig. 2). Collins teaches the use of machine learning techniques to improve the representation of natural language processing (where natural language processing is a sequence of operations to generate a representation of text) (§1, "Introduction"). Thus, the functions are similar.

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Conclusion

Any response to this office action should be mailed to:

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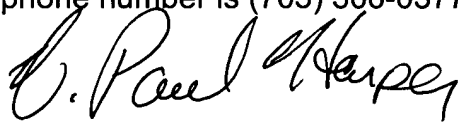
Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.



VPH/vph
September 15, 2003



9/16/03

**VIJAY CHAWAN
PRIMARY EXAMINER**